

USSR

UDC: 621.3.014.2 (1)

LEMBERG, Ye. A., et al, Pribory i tekhnika eksperimenta, No 1,
1973, pp 140-142

Bolotin and Ya. B. Faynberg for their interest and their comments.

USSR

UDC: A621.3.014.2 (1)

LEMBERG, Ye. A., TKACH, Yu. V., MAGDA, I. I., GADETSKIY, N. P.,
and ABRAMOVICH, V. U.

"Switching Dischargers With a Pulsed Gas Laser in the Ultraviolet Range"

Moscow, Priory i tekhnika eksperimenta, No 1, 1973, pp 140-142

Abstract: The use of a nitrogen gas laser operating at a wavelength of 3371 Å in the control of an air discharger is investigated in this experimental paper. A simplified diagram is given of the experimental equipment together with a curve of the discharger operation as a function of the voltage across its electrodes, and an oscillogram of the current pulses from two discharges connected by a constant delay circuit. The power of the laser was 25-30 kW at a pulse duration of 10 nsec, and the laser was pumped by an oscillator of the Arkad'yev-Marks circuit producing a pulse with a steep leading edge. The experiments involved tests of dischargers using various types of electrode metals -- Cu, Zn, and Mo -- with the laser radiation focused by a quartz lens on the electrode with the negative potential. Synchronization of two identical dischargers by the laser beam was also investigated. The authors thank L. I. 1/2

ABRAMOVICH, V. N.

USING PULSED ULTRAVIOLET-WAVELENGTH GAS LASERS TO SWITCH SPARK CAPS

UDC 621.3.014.2

Article by Ye. A. Lemberg, Yu. V. Nach, I. I. Lashin, P. I. Gedeiski, and V. N. Abramovich: Moscow, Prilozheniya k Zhurnalov
Experiments, Moscow, No. 1, January 1973, pp. 140-142

Two air spark gaps could be ignited at a frequency of 15-20 hertz using a pulsed ultraviolet molecular nitrogen laser generating radiation with wavelength 3.371 Å and power 30 kw. The breakdown synchronization attained was not worse than 1 nsec. The dependence of the time of laser-initiated spark gap activation on the voltage applied is shown for various spark gap lengths.

The possibility of controlling an air spark gap by a nitrogen gas laser with a generation wavelength of 3.371 Å is investigated in this paper. The gap is actuated by distortion of the space charge field by photoelectrons emitted upon irradiation of the electrodes by quanta possessing an energy level close to the photoionization threshold. Although the probability of photoelectron emission is lower in this case than in experiments with shorter wavelength radiation, nevertheless since coherent radiation is employed a greater photon density can be created which compensates for the reduced number of photoelectrons.

Experiments were conducted with the setup diagrammed in Figure 1. The nitrogen laser's generation power attained 25-30 kw with a pulse length of 10 nsec. Pumping was performed by a generator producing a very steep pulse front assembled on the basis of an Arad'kev-Marks circuit. A system of compensating capacitors was used to reduce pulse rise time

USSR

UDC: 8.74

RASTRIGIN, L. A., YAMPOL'SKAYA, T. S., RASTRIGIN, V. L.,
ABRAMOVICH, V. L.

"An Adaptive Program for Instruction in Memorizing Foreign Words"

Riga, Adaptiv. sistemy--sbornik (Adaptive Systems--collection of works), vyp. 2, "Zinatne", 1972, pp 66-75 (from RZh-Kibernetika, No 5, May 73, abstract No 5V822 by the authors)

Translation: An adaptation program is proposed for teaching foreign words with regard to the individual peculiarities of the pupil. A model of the teaching process was developed which was implemented on a digital computer. The effectiveness and convergence of the adaptation process are demonstrated.

Acc. Nr.: AN0104123

"A SERIES OF INVESTIGATIONS INTO THE DYNAMICS OF A BODY WITH FLUID-FILLED CAVITIES", /65-68/, BY N. N. MOISEYEV, A. A. PETROV, V. V. RUMYANTSEV AND F. L. CHERNOUSKO AND "ULTRA HIGH PRECISION JIG BORING MILLS WITH 1,000 X 1,600 AND 1,400 X 2,240 MM PLATENS", BY A. I. KIRYANOV, V. G. ABRAMOVICH, I. V. GUTKIN, A. S. ALTUNIN, G. B. PAUKOV, AND A. S. YEGUDKIN, HAVE BEEN SUBMITTED BY THE COMPUTATION CENTER OF THE ACADEMY OF SCIENCES AND THE MINISTRY OF THE MACHINE TOOL CONSTRUCTION AND TOOL INDUSTRY, RESPECTIVELY.

"THE RADICALLY IMPROVED MELTING TECHNOLOGY OF CRITICAL-PURPOSE HIGH-ALLOY STEELS AND ALLOYS OF IMPROVED QUALITY ACHIEVED BY THE INERT GAS TREATMENT OUTSIDE THE FURNACE", BY YU. V. GERASIMOV, O. M. CHEKHOMOV, N. V. SIDOROV, S. K. FILATOV, B. A. CHELENYKH, R. M. KHAYRUTDINOV, I. P. BARMOTIN, L. K. KOSYREV, K. P. BAKANOV, N. N. VLASOV, P. I. MELIKHOV, AND N. A. TULIN, HAS BEEN SUBMITTED BY THE ZLATOUST METALLURGICAL PLANT.

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Reel/Frame

19870556

KZ

ABRAMOVICH V.G.

Acc. Nr.: ANO104123

Ref. Code: UR9003

TITLE-- ANNOUNCEMENT OF THE COMMITTEE ON LENIN AND STATE PRIZES, U.S.S.R. 49

NEWSPAPER-- IZVESTIYA, MAY 28, 1970, P 4, COLS 1-5

ABSTRACT-- NINETY ONE BASIC AND APPLIED RESEARCH WORKS HAVE BEEN NOMINATED FOR THE STATE PRIZES. TWO OF THESE, "THE MULTI-PURPOSE INDUSTRIAL HELICOPTER KA-26", BY N. I. KAMOV, V. B. ALPEROVICH, V. B. BARSHEVSKIY, A. A. DMITRIYEV, G. I. IOFFE, M. A. KUPFER, L. A. POTASHNIK, N. N. PRIOROV, A. G. SATAROV, I. M. VEDENEYEV, S. B. BREN, AND V. A. NAZAROV, AND "THE DEVELOPMENT OF TURBOFAN JET ENGINES NK-8 AND NK-8-4, AND THE DEVELOPMENT AND REDUCTION TO SERIAL PRODUCTION A SYSTEM OF TECHNOLOGICAL PROCESSES WHICH ASSURED WIDE USES FOR TITANIUM ALLOYS", BY N. D. KUZNETSOV, M. T. VASILISHIN, V. A. KURGANOV, P. M. MARKIN, V. D. RADCHENKO, P. A. SUKHOV, A. A. MUKHIN, V. G. SHITOV, G. I. MUSHENKO, L. A. SHKODO, AND G. P. DOLGOLENKO, HAVE BEEN SUBMITTED BY THE MINISTRY OF THE AVIATION INDUSTRY.

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Reel/Frame
19870555

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USSR

UDC 8.74

ABRAMOVICH, S. M.

"Family of TAU-11 Transmitters from the ALGOL-60 Algorithmic Language"

V sb. Razrabotka translyatorov (Development of Translators--collection of works), Rostov-na-Donu, Rostov University, 1972, pp 117-189 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 13V469)

Translation: The translators of the TAU-11 family are oriented toward a different configuration of the Ural-11 computer. They have a number of advantages making their broad introduction very useful. Among these advantages are the following: high transmission speed, convenient location of the areas both during translation and when calculating by the operating program. The paper is of interest for systems programmers and transmitter developers.

USSR

ABRAMOVICH, V.I., VORONICHEV, N.A., and CHIRIK, A.A.

"Dependence of Use of Rectifiers in Practicable Circuits for Conversion of Electrical Energy on Boundary and Dynamic Parameters"

Preobrazovatel'n. tekhnika. Mashino-stran. sb. (Converter Technology. Scientific-Technical Collection), 1970, No 1, pp 11-14 (from Elektronika, 1970, Primeneniye, No 8, August 1970, Abstract No 88426)

Translation: Factors are considered which limit with respect to power the use of rectifiers [ventil] in practicable circuits for conversion of electrical energy: the permissible short circuit current as a function of time, the permissible rate of growth and decrease of the current, and the duration of the permissible current as a function of the frequency and time of restoration of the control factor. Computed formulas are presented for the classified, rated, and actual powers of the rectifiers. The actual power of rectifiers in a converter circuit is computed as a function of the rated and boundary parameters and is expressed by a classified power. 2 ill. 1 ref. Summary.

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USSR

UDC: 621.372.54

MOSTYAYEV, V. A., IVANOV, A. D., ABRAMOVICH, M. I., KUZIN, V. I., YAROSLAVSKIY, M. I.

"Low-Frequency Quartz Resonators With Vibrators Mounted by the Pressure Welding Method With Indirect Pulse Heating"

Elektron. tekhnika. Nauch.-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 5, pp 26-30 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V381)

Translation: The authors consider parameters of low-frequency quartz resonators with contour and bending vibrations in which the leads are fastened to the piezoelectric elements by pressure welding with indirect pulse heating. It is shown how these resonators have advantages over those in which the leads are fastened to the piezoelectric elements by soft solder. Authors' abstract.

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USSR

BOGOYAVLENSKIY, A. F., et al, Zhurnal Prikladnoy Khimii, Vol 43,
No 1, Jan 70, pp 92-96

treatment. On treatment of the kerosene for 15-60 min at temperatures of 20-35° and power densities of 94-156 W/l., the I_2 number that was raised by the treatment decreased to only an insignificant extent within 6 hrs and then remained constant for 2 days - i.e., the chemical changes produced in the hydrocarbons by ultrasound were stable.

2/2

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Petroleum Processing Technology

USSR

UDC 62-634:534.321.9

BOGOYAVLENSKIY, A. F., SHAMES, S. I., and ABRAMOVICH, L. K., Kazan Aviation Institute, Kazan', Ministry of Higher and Secondary Specialized Education RSFSR

"Changes in the Composition of Kerosene TS-1 Under the Action of Ultrasound"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 1, Jan 70, pp 92-96

Abstract: Kerosene TS-1 (GOST 10227-62) was subjected to the action of ultrasonic waves at a frequency of 20 kc and temperatures of 10-35°. While the calorific value, flash point, density, and content of aromatic hydrocarbons of the fuel did not show significant changes, the degree of unsaturation of the kerosene hydrocarbons, as indicated by the iodine number, could be increased within wide limits by the treatment. The I₂ number increased with an increasing power density of the ultrasound. Irrespective of the power density applied and the temperature, the maximum increase in the I₂ number was obtained on treatment for 10 min; treatment for a greater length of time did not result in a further significant increase. The degree of unsaturation produced increased with decreasing temperatures of

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2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134945

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE REACTION IS 1ST ORDER. IT GIVES 2,3,DIMETHYL,1,7,TRIMETHYLENEINDOLE,5,SULFONIC ACID (I). THE STRUCTURE OF I WAS ESTABLISHED BY ITS CONVERSION TO THE AMIDE, ALSO PREPD. BY TREATING 2,3,DIMETHYL,1,7,TRIMETHYLENEINDOLE WITH CLSO SUB3 H TO GIVE THE ACID CHLORIDE OF I, WHICH WAS TREATED WITH NH SUB3. THE SULFONATION RATE CONSTS. INCREASE LINEARLY WITH SO SUB3 CONCN. IN H SUB2 SO SUB4 USED IN THE REACTION. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--KINETICS AND MECHANISM OF THE SULFONATION OF
2,3,DIMETHYL,1,7,TRIMETHYLENEINDOLE IN CONCENTRATED SULFURIC ACID
AUTHOR--(04)-VINNIK, M.I., ABRAMOVICH, L.D., YUDIN, L.G., BUDYLIN, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OKG. KHIM. 1970, 6(5), 1061-5

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION KINETICS, CHEMICAL REACTION MECHANISM,
SULFONATION, SULFURIC ACID, AQUEOUS SOLUTION, INDOLE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY KEEL/FRAME--3006/1271

STEP NO--UR/0366/70/006/005/1061/1065

CIRC ACCESSION NO--AP0134945

UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0112998

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE EFFECT OF A DISCRETE ADMIXTURE OF SOLID PARTICLES OR LIQUID DROPS ON THE PROPAGATION OF AN INHOMOGENEOUS TURBULENT JET. IT IS SHOWN THAT IN A FIRST APPROXIMATION THE EFFECT OF SOLID PARTICLES ON THE PULSATION VELOCITIES AND AVERAGED PARAMETERS OF A TURBULENT FLOW CAN BE ESTIMATED WITH THE AID OF THE BASIC PREMISES OF PRADTL MIXING LENGTH THEORY. A PARTICULAR ATTEMPT IS MADE TO ASCERTAIN THE EXTENT TO WHICH THE FINAL VALUES OF THE GAS MOLE VELOCITIES AND THE SOLID PARTICLE VELOCITIES CONVERGE. FACILITY: MOSKOVSKII AVIATIONNYI INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--EFFECT OF AN ADMIXTURE OF SOLID PARTICLES OR DROPS ON THE STRUCTURE
OF A TURBULENT GAS JET -U-
AUTHOR--ABRAMOVICH, G.N. A

COUNTRY OF INFO--USSR

SOURCE--AKADEMIYA NAUK SSSR, DOKLADY, VOL. 190, FEB. 11, 1970, P.
1052-1055
DATE PUBLISHED--11FEB70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GAS JET, TURBULENT JET, PARTICLE MOTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/2043

STEP NO--UR/0020/70/190/000/1052/1055

CIRC ACCESSION NO--AT0112998

UNCLASSIFIED

USSR

ABRAMOVICH, G. N., et al., Doklady Akademii Nauk SSSR, Vol 202, No 4,
1 Feb 72, pp 783-786

to 0. Expressions for turbulent friction in two-dimensional flow can be obtained for various orientations of the external magnetic field. On the basis of the obtained expressions for turbulent friction, consideration is given to the flow of an electrically conductive liquid in a free boundary layer in the simplest case, when the influence of the magnetic field with average motion is absent (the case of a longitudinal field and a circumferential field). From formulas obtained with the presence of a magnetic field, it becomes evident that an increase in the value of the criterion of magnetic hydrodynamic interaction (of the magnetic field) brings about a narrowing of the mixing-zone width in comparison to the case of the absence of a magnetic field. 6 references.

USSR

UDC: 537.517.519.512.4

ABRAMOVICH, G. N., KOVNER, K. S., LUSHCHIK, V. G., Moscow Aviation Institute
Imeni Sergo Ordzhonikidze

"Concerning the Action of a Magnetic Field on Turbulence in a Shear Flow"

Moscow, Doklady Akademii Nauk SSSR, Vol 202, No 4, 1 Feb 72, pp 783-786

Abstract: Experimental research shows that when a magnetic field is imposed upon the turbulent flow of an electrically conductive liquid, the level of turbulence, the friction stress, and the intensity of heat exchange usually decrease. The influence of the magnetic field on these turbulence characteristics can be qualitatively explained and quantitatively evaluated on the basis of Prandtl's mixing-path theory. In a turbulent flow in the absence of a magnetic field, it is usually assumed that from the moment of origin of a discrete turbulent mole until fusion with a new layer of liquid it moves by inertia, retaining a constant value of velocity, and at the moment of loss of its individuality it creates a velocity pulsation equal to the difference of the averaged velocities at the length of the mixing path. It can be seen that the forces acting upon the mole in a magnetic field are always directed against its motion, in other words they bring about a decrease of the pulsation velocity, the pulsation-force component in the direction of the magnetic field being equal $1/2$

USSR

ABRAMOVICH, G. N. et al., Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 72, pp 25-32

$Re = 15\,500$ for the first mode, and $Re = 3.8$, $p = 18.1$ mb, $Pe = 17\,800$ for the second mode. The stagnation temperature in the jet and the accompanying flow was about $300^\circ K$. The velocity distribution was determined with respect to the fields of dynamic pressures found by means of an ordinary gauge with transverse dimension of 0.35 mm. Vent holes were used for measuring the static pressure on the plate. The concentration in the supersonic flow was measured by a method based on determining the thermal conductivity of the mixture flowing through the gauge as a function of concentration. Non-self-similar isobaric flow was numerically calculated in the boundary layer approximation using the equation for turbulent viscosity as the closure relation. A comparison of the experimental and theoretical results showed that the proposed analytical method is applicable to description of turbulent compressed flows.

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USSR

UDC: 532.525.2

ABRAMOVICH, G. N., KUZ'MICH, V. B., SEKUNDOV, A. N., SMIRNOVA, I. P.,
Moscow

"Experimental and Theoretical Study of a Supersonic Jet Near a Wall in an
Accompanying Supersonic Flow"

Moscow, Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 70, pp
25-32

Abstract: Experiments were done in a supersonic ($M=2-4$) continuous
action wind tunnel. A flat jet was blown in along a plate located in
the middle of the working section of the tunnel through a specially
shaped nozzle with an output section 2 mm high and a throat 0.8-0.9 mm
high. The end of the nozzle was 80 mm away from the sharpened leading
edge of the plate. The plate was 200 mm wide and 400 mm long. Two modes
of flow were considered. The Mach number in the initial section of the
jet for both modes was $M_1 = 2.18$. The Mach number of the accompanying
flow, the static pressure in the working section of the tunnel, and the
Reynolds number determined with respect to the height of the nozzle and
the oncoming flow parameters were respectively: $M_2 = 2.7$, $p = 38.6$ mm,

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2/2 032

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120957

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMINO ACID CONTENT OF BLOOD SERUM OF 6 HEALTHY INDIVIDUALS AND 27 PATIENTS WITH HAEMOCYTOBLASTOSIS HAS BEEN STUDIED BY MEANS OF ION EXCHANGE CHROMATOGRAPHY WITH THE USE OF HITACHI AMINO ACID ANALYZER. THE STATISTICALLY SIGNIFICANT INCREASE IN VALINE, LYSINE, PROLINE, LEUCINE, ISOLEUCINE, TYROSINE, PHENYLALANINE, AND METHIONINE CONTENT IN BLOOD SERUM OF PATIENTS WITH LEUCOSIS TOOK PLACE. IN THE COURSE OF STUDIES OF CHANGES IN CONTENT OF EACH AMINO ACID RELATIVELY TO THEIR TOTAL SUM IT WAS DISCLOSED THAT THE CONTENT OF HISTIDINE AND GLYCINE IN BLOOD SERUM OF PATIENTS WITH ACUTE LEUCOSIS IS DECREASED. ON THE OTHER HAND THE AMOUNT OF METHIONINE IS INCREASED. THE CONCLUSION IS DRAWN ON THE CHANGES IN AMINO ACID METABOLISM IN PATIENTS WITH ACUTE LEUCOSIS. FACILITY: INSTITUTE OF CHEMICAL PHYSICS USSR ACADEMY OF SCIENCES MOSCOW.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--FREE AMINO ACIDS OF BLOOD SERUM OF PATIENTS WITH ACUTE LEUCOSIS -U-
AUTHOR-(02)-ABRAMOVICH, A.B., YEVSEYENKO, L.S.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 263-265
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--AMINO ACID, BLOOD SERUM, CHROMATOGRAPHY, METABOLISM, LEUKEMIA,
BLOOD DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0267 STEP NO--UR/0301/70/016/003/0263/0265
CIRC ACCESSION NO--AP0120957
UNCLASSIFIED

USSR

BOLTUSHKINA, L. A., ABRAMOVA, Zh. I., PROKHOROV, V. N., and CHERNYI, Z. Kh.

"Ulcerogenic Effect of Chlorophos"

V sb. Nauchn. sessiya, posvyashch. itogam raboty Leningr. NII gigiyeny truda i prof. zabolevaniy za 1968-1969 gg., 1970. Tezisy dokl. (Scientific Session Devoted to the Results of the Work of the Leningrad Scientific Research Institute of Labor Hygiene and Occupational Diseases for 1968-1969, 1970: Summaries of Papers -- Collection of Works), Leningrad, 1970, pp 29-30 (from RZh-Farmakologiya, Khimoterapevticheskiye Sredstva, Toksikologiya, No 4, Apr 71, Abstract No 4.54.709 by N. A. AVKIMENKO)

Translation: Chlorophos in a dose of 150 mg/kg for 10 days was administered internally to male rats. Findings: change in acidpepsin factor; positive Pauls' index; inhibition of blood cholinesterase activity; insignificant changes in serotonin content of subcortical brain formations and gastric tissues. Under the combined action of chlorophos and ulcerogenic factors (reserpine 5 mg/kg, atophan 500 mg/kg, stress) destructive lesions of the gastric wall were more pronounced. The authors conclude that chlorophos affects the gastrointestinal tract.

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UDC 577.1:615.7/9

USSR

ABRAMOVA, ZH. I., CHERNYY, Z. KH.

"Mechanisms of Adaptation to Industrial Poisons. The Role of Blood Circulation of Catecholamines and Serotonin in the Formation of Protective Adaptive Reactions"

V sb. Nauch. osnovy sovrem. metodov gigiyen. normirovaniya khim. veshchestv v okruzhayushchey srede (Scientific Principles of Modern Methods of Hygienic Normalization of Chemicals in the Environment -- collection of works), Moscow, 1971, pp 105-110 (from RZh-Biologicheskaya Khimiya, No 13, Jul 72, Abstract No 13F2139)

Translation: This is a brief survey. Data are presented on the basis of which the authors draw the following conclusions regarding the possible mechanisms of the formation of protective adaptive reactions of the organism to the effect of extremal stimuli, including those of a chemical nature: neuro-reflex and neurohumoral means of mobilizing the physiological reserves are insured by the monoamine-energy structures supporting the ergotropic and trophotropic functions; the increase in circulation of the pyrocatechinamines (especially noradrenalin) and serotonin is the basic triggering mechanism of mobilizing the reserve possibilities of the organism.

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USSR

UDC 615.917:547.234.9'222.2

ABRAMOVA, ZH. I., CHERNYY, Z. KH. and BOLTUSHKINA, L. A., Institute of Labor Hygiene and Occupational Diseases, Leningrad

"Pathogenesis of Granosan Intoxication"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 11, 1972, pp 21-24

Abstract: The effect of granosan was studied by subcutaneous injection of 5 mg/kg twice a week into male white rats weighing 180-240 grams and intraperitoneal injection into male mice weighing 18-25 grams of 5 mg/kg daily for 20 days. The threshold of electrical stimulation was measured, the behavioral effect of phenamine, apomorphine and reserpine was studied and urinary levels of 5-hydroxyindole acetic acid, epinephrine and norepinephrine were studied. Serotonin levels were measured in brain and stomach tissues. It was observed that changes included increased irritability, lessened effect of phenamine, apomorphine and reserpine action compared to controls, and altered tryptophan, serotonin and catecholamine metabolism, although no change in norepinephrine levels in the brain was found.

2/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0122362

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. S, ZNO, ZN(S SUB2 CNET SUB2) SUB2, AND ZN(S SUB2 CNETPH) SUB2 DISPERSIONS WERE PREPD. IN A BEAD MILL GIPI-LKP (HAVING GLASS BEADS 0.63-1 MM IN DIAM.), A BIVRATORY MILL M-200, AND A BALL MILL, AND THE PARTICLES WERE EXAMD. UNDER A MBI-6 MICROSCOPE. SEDIMENTATION ANAL. INDICATED THAT THE DEGREE OF DISPERSION OF THE INGREDIENTS WAS IDENTICAL REGARDLESS OF THE MILL USED, BUT THE BEAM MILL WAS THE MOST PRODUCTIVE. BUTYL TUBBER FILMS FILLED WITH THE VARIOUS DISPERSIONS HAD SIMILAR PHYSICOMECH. PROPERTIES. FACILITY: NAUCH.-ISSLED. INST. REZIN. LAT. KSNYKH IZDELII, MOSCOW, USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PREPARATION OF DISPERSIONS OF INGREDIENTS FOR LATEX MIXTURES -U-
AUTHOR--(05)-MAZINA, G.R., MIROKHINA, G.A., PUTYATINA, Z.P., YDOVCHENKOVA.
M.K., ABRAMOVA, YE.N.
COUNTRY OF INFO--USSR
SOURCE--KAUCH. REZINA 1970, 29(2), 19-21
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--LATEX, MICROSCOPE, BUTYL RUBBER, FILLER, SULFUR, ZINC
COMPOUND, ROLLING MILL/(U)V200 VIBRATORY MILL, (U)MB16 MICROSCOPE,
(U)GIPI LKP BEAD MILL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/0096

STEP NO--UR/0138/70/029/002/0019/0021

CIRC ACCESSION NO--AP0122362

UNCLASSIFIED

USSR

UDC 669.295'27.2

SAMSONOV, G. V., CHAPLYGIN, F. I., VITRYANYUK, V. K., and ~~ABRAMOVA, V. S.~~
Kiev

"Physico-Mechanical Properties of Tungsten Titanate Solid Alloys With Carbon Deficit in the Lattice of the Carbide Solid Solution"

Moscow, Izvestiya Akademii Nauk USSR, Metally, No 5, Sep-Oct 72, pp 158-162

Abstract: An investigation was made of the production conditions of solid solutions of the T15K6 type based on composite carbides $0.6 \text{ TiC}_{1.0}-0.4 \text{ WC}$, $0.6 \text{ TiC}_{0.8}-0.4 \text{ WC}$, and $0.6 \text{ TiC}_{0.6}-0.4 \text{ WC}$. The alloys, after sintering in a hydrogen medium, possess satisfactory physico-mechanical properties, but caking in vacuum results in embrittlement due to the vaporization of cobalt. A decrease in the carbon content in the composite carbide $\text{TiC}_x \leq 1$ -WC results in increased coercivity, increased specific electric resistance, slightly increased hardness, and decreased bending strength. In alloys produced on the basis of $\text{TiC}_{0.6}$ -WC composite carbide the γ_1 phase is present, as in WC-Co alloys. The cutting properties of the investigated alloys in processing steel 50 are 30-40% higher than those of the standard T15K6 alloy. Four figures, two tables, eight bibliographic references.

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USSR

POLYAKOV, D. A. (Cand. of Techn. Sciences), et al, Svarochnoye proizvodstvo, Oct 71, no 10, pp 22-24

may be considerably increased by annealing. In resistance spot welding optimum properties of welds of VT14L plus VT14 alloys are ensured by quenching and aging the plates prior to welding without quench-hardening the weld. Tables in the original article cite data on the mechanical properties of base materials VT14L and VT14 alloys used per se and data on the mechanical properties of welds from VT14L-VT14 combinations in a variety of states, data on the strength of spot welds in shearing tests and as well as those after holding at 300°C, and finally strength properties of welds after annealing in repeated static loading.

UDC: 621.791.011:669.295

USSR

POLYAKOV, D. A. (Cand. of Techn. Sciences), ~~ABRAMOVA, V. N.~~ (Engineer),
SEDYKH, K. V. (Engineer), ZYKOV, YE. V. (Engineer), and ZACHESOVA, O. A.
(Engineer)

"Weldability of the Cast VT14L Titanium Alloy"

Moscow, Svarochnoye proizvodstvo, Oct 71, no 10, pp 22-24

Abstract: This study has been prompted by problems related to replacement of stamping and forging in the fabrication of parts from quench-hardened VT14 alloy with castings from the VT14L alloy. It is shown that the welding technology of VT14L alloy and its combinations with the formable VT14 alloy is practically no different from that of VT14 and other well known titanium alloys. In argon-arc welding of VT14L as annealed and of that in combination with VT14 as hardened (aging after welding) or in welding of both as annealed and as aged, the welds feature a strength equal to the VT14L base metal, while plasticity and impact toughness of the welds are much lower than those of the base metal. Both the plasticity and impact toughness

USSR

UDC 621.791.052.015:620.192.47:669.295

POLYAKOV, D. A., Candidate of Technical Sciences, and ABRAMOVA, V. N.,
Engineer

"Influence of Surface Condition on Gas Content and Properties of Welded
Joints of Titanium Alloys"

Moscow, Svarochnoye Proizvodstvo, No 7, 1971, p 31-32.

Abstract: Welded joints produced of titanium alloys have surface layers saturated with gases. Various methods were studied for removal of the surface layer: wire brushes, abrasive tools, and scrapers. It was found that when the joints show temper colors, cleaning of the surface with a wire brush significantly increases cyclical strength. The brush material (carbon and stainless steel wire) has no significant influence on the properties of the welded joints. Treating the surface of welded joints with a sandpaper disk decreases cyclical strength. Cleaning of seams with a blue surface with the wire brush more than doubles the cyclical strength.

1/1

ABRAMOVA, V. M.

EFFECT OF FLIGHT CONDITIONS ON THE RADIOSENSITIVITY OF HYDROGEN BACTERIA CELLS

SC: JPRS 55100
4 FEB 72

UDC 576.852.24 (Hydrogenomonas):629.78

Article by V. M. Abramova, V. N. Benovol'skiy and Ya. P. Druzhinin; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 5, No 6, 1971, submitted for publication 25 June 1971, pp 18-21.

Abstract: Investigations were carried out to determine the effect of flight conditions and prolonged ground storage on the viability and radiosensitivity of *Hydrogenomonas eutropha*, strain Z-1, exposed as an aqueous suspension. Radiosensitivity was measured during pre- and postflight exposures to Co^{60} gamma radiation. The absolute number of cells with inactivated division declined slightly and their radiosensitivity decreased as a result of extended (up to 10 days) storage at the temperature of melting ice and at room temperature, including during orbital flight. There was no distinct difference in the radiosensitivity of the *Hydrogenomonas* bacteria used in the experiment and in the control.

An electropolymerization apparatus with hydrogen bacteria can be used in a spaceflight life support system (G. I. Vot'min and A. I. Pol'yodan; L. A. Ivanova and V. K. Kovalevskaya). The reliability of its operation during a long flight, together with many other factors, will be determined by maintenance of the reproductive activity of cells when they are cultivated in a hemostat or stored in a dormant state in the form of reserves of soluble material. In both cases the viability of hydrogen bacteria can vary, especially under the influence of cosmic radiation.

The degree of the survival danger from irradiation of any organism during flight can be determined on the basis of data on its radiosensitivity under standard irradiation conditions and its changes under the influence of a wide range of modifying factors characteristic of spaceflight (V. N. Benovol'skiy, et al.; Yu. G. Grigor'yev, et al.). We did not find this type of information in the literature concerning hydrogen bacteria. The purpose of

USSR

UDC 621.374.933 (095.6)

STARIK, A.M., ABRAMOV, I.S.

"ATR Tube"

USSR Author's Certificate No 243677, filed 4 May 67, published 3 Oct 69 (from
RZh--Elektronika i yeye primeneniye, No 6, June 1970, Abstract No 11515)

Translation: An anti-transmit-receive tube is proposed which consists of an air-tight rectangular waveguide containing a resonant diaphragm with cones and lamellas and filled by ionizable gas, and an exterior magnetic system. The lamellas of the diaphragm have smoothly tapered projections [vystup] at the cones, fulfilled from magnetic material and united with poles of the exterior magnet through a hole in the narrow walls of the waveguide. The field of the magnet is parallel to the wide wall of the waveguide and is sufficient to create cyclotron resonance of the electrons in the clearance between the projections of the lamellas. Such a construction makes it possible to reduce the power for firing and to reduce the dimensions and weight of the magnetic system. 1 ill. G.B.

2/2 029

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0131512

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CRIT. FIELD, E_{SUBCR} , CORRESPONDING TO THE FORMATION OF A UHF DISCHARGE IS CONSIDERABLY DECREASED AT CYCLOTRON RESONANCE. THE FORMATION OF SUCH A DISCHARGE WAS STUDIED EXPTL. IN HE, NE, AR, KR, AND XE AT 3 CM WAVELENGTH UNDER RESONANCE CONDITIONS, E_{SUBCR} WAS DETD. AT DIFFERENT PRESSURES BY MEASURING THE POWER TRANSMITTED THROUGH A WAVEGUIDE HAVING A GAS CONTAINER. BY CONSIDERING DIFFERENT DIFFUSION COEFFS. CORRESPONDING TO FREE AND AMBIPOLAR DIFFUSIONS AND BY USING THE THEORY OF FORMATION OF A UHF DISCHARGE (1957), E_{SUBCR} WAS CALCD. AS A FUNCTION OF PRESSURE FOR HE, NE, AND AR. THE EXPTL. AND THEORETICAL CURVES AGREE FAIRLY WELL. COMPARISON OF RESULTS WITH THOSE IN THE ABSENCE OF THE MAGNETIC FIELD SHOWED THAT THE CYCLOTRON RESONANCE REGION IS CHARACTERIZED BY A MIN. VALUE OF E_{SUBCR} 4-5 TIMES LOWER. THE PRESSURE CORRESPONDING TO MIN. E_{SUBCR} IS ALMOST 2 ORDERS OF MAGNITUDE LESS THAN THAT IN THE ABSENCE OF THE MAGNETIC FIELD.

UNCLASSIFIED

1/2 029

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--FORMATION OF A PULSED UHF, ULTRAHIGH FREQUENCY, DISCHARGE UNDER
ELECTRON CYCLOTRON RESONANCE CONDITIONS -U-

AUTHOR--(03)-ABRAMOVA, T.S., GOLANT, V.YE., STARIK, A.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. TEKH. FIZ. 1970, 40(5), 982-6

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CYCLOTRON RESONANCE, HIGH FREQUENCY DISCHARGE, ULTRAHIGH
FREQUENCY, GAS DISCHARGE, GAS PRESSURE, DIFFUSION COEFFICIENT, MAGNETIC
FIELD EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3004/0926

STEP NO--UR/0057/70/040/005/0982/0986

CIRC ACCESSION NO--AP0131512

UNCLASSIFIED

USSR

FURMAN, YE. G., et al., *Plasticheskiye Massy*, No 1, Jan 72, pp 12-15

molecular analog -- N-butylpropionamide. It is found that secondary arylamines have a protective effect during radiation oxidation of polyamides, and that this effect is due to the interaction between peroxide radicals and amines, resulting in the breaking of chains and leading to stable nitrate radicals instead of reactive peroxide radicals. The authors thank S. I. Burmistrov for furnishing some of the specimens. Five figures, two tables, bibliography of eleven titles.

2/2

Radiation Chemistry

USSR

UDC 678.675'126.019.3:538.16

FURMAN, YE. G., ABRAMOVA, T. M., DAR'YEVA, E. P., SPIRINA, I. A., FOMENKO, A. S.,

"Radiation-Chemical Transformations of Polycaproamide in the Presence of Secondary Aromatic Amines"

Moscow, Plasticheskiye Massy, No 1, Jan 72, pp 12-15

Abstract: The paper presents the results of a study of the effect which esters of 4-hydroxydiphenylamine and certain other secondary aromatic amines, as well as substituted phenols have on process of radiation and radiation-oxidation destruction of polycaproamide. Seventeen of these additives were studied in quantities of 0.03 mole/kg. Studies were made of the influence of the additives on accumulation of free radicals, gas release, fragmentation of the polymer chain during radiolysis and radiation oxidation of polycaproamide, as well as their effect on accumulation of peroxide and carboxyl compounds as a function of temperature and concentration of the additive accompanying radiation oxidation of the polymer. The electron paramagnetic resonance method was used to determine the structure and stability of the radicals formed when secondary aromatic amines interact with the peroxide radicals which arise during radiation oxidation of the polycaproamide and its low-
1/2

100-443886-5

A structural and kinetic study was made of the oxidizability of $\text{Ni} + \text{I}^{\text{I}}\text{Cr}$ and $\text{Ni} + \text{I}^{\text{I}}\text{Cr} + \text{Zn}$ alloys containing 0.2 percent Cr, Ia and Y each at 1000°C .

It was found that the introduction of additives of rare earth elements into the indicated alloys decreases their oxidation rate by 3-8 times; alloys containing yttrium have the greatest oxidation resistance.

Modern oxidation-resistant nickel-chromium based alloys are usually alloyed with such elements as tungsten, molybdenum and cobalt. While increasing the high-temperature strength of the alloy, these elements lower its oxidation resistance. Accordingly, we are faced with the problem of lowering the oxidation rate of such alloys. The published literature contains data on the effect of rare earth elements on the oxidizability of Ni20CrNiO alloys [1].

The purpose of the present paper is to study the effect of yttrium, lanthanum and cerium additives on the oxidation kinetics of Ni + 10% Cr and Ni + 10% Cr + 6% W alloys.

Experimental Section

The alloys were made in an arc furnace with permanent electrodes in a helium atmosphere. In order to achieve uniform distribution of the alloying additives in the ingots, a folded reaction of them with subsequent homogenization treatment was performed. The raw earth elements were introduced calculating 0.2 percent of the charge mass. Their loss was 30-50 percent. The procedure for preparing the alloys was described in detail in the literature [2]. The samples of the alloys for structural-analytic studies of the solubility of the alloying elements in the matrix were made in the form of rods. They had the shape of cylinders 10 mm in diameter and 5 mm high.

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USSR

ABRAMOVA, N. A., Vychisl. sistemy, vyp. 41, Novosibirsk, 1971, pp 3-12

partitions of a graph with tagged vertices and ends of edges into identical parts which are identically interrelated, e. g. in the theory of synthesis of finite automata. V. Mikheyev.

USSR

UDC: 8.74

ABRAMOVA, N. A.

"Proper Partitions of Logic Networks"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 41, Novosibirsk, 1971, pp 3-12 (from RZh-Kibernetika, No 5, May 72, Abstract No 5V493)

Translation: The following theorem is proved. The network L has a non-maximum proper partition \mathcal{L} when and only when in the group of automorphisms of the network $G(L)$ there exist subgroups $H_0, H, H_1 \subseteq G(L)$ such that for some element $A_{0,\alpha}$ from each system of transitivity $M_\alpha(H)$ with respect to subgroup H it is true that $H_{\alpha_1} \subseteq H_0$, where H_{α_1} is a subgroup of automorphisms

from H which take $A_{0,\alpha}$ into itself. Automorphism of a network is understood to mean a substitution on a set of elements of the network such that identified poles of the elements are mapped onto identified poles, and substitution of the poles of each element by the poles of the element onto which it is mapped is permissible. An illustrative example is presented. It is noted that the results can be used not only in studies of homogeneous and iterative media, but also in all problems where the necessity arises for

USSR

ABRAMOVA, N. A., Vychisl. sistemy, vpy 41, 1971, pp 3-12

for partitions of a graph with marked vertices and ends of edges into identical parts, identically interconnected, for example, in the theory of the synthesis of finite automata.

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UDC 8.74

ABRAMOVA, N. A."Regular Partitions of Logical Networks"

V sb. Vychisl. sistemy (Computer Systems -- Collection of Works), vyp. 41, Novosibirsk, 1971, pp 3-12 (from RZh-Matematika, No 5, May 72, Abstract No 5V493 by V. MIKHEYEV)

Translation: The following theorem is proved: Network L possesses nonmaximum regular partition \mathcal{X} if and only if in an automorphism group of network $G(L)$ there exist subgroups $H_0, H, H_0 \subset H \subseteq G(L)$ such that for a certain element $A_{G, \mathcal{X}}$ from each system of transitivity $M_{\mathcal{X}}(H)$ according to subgroup H $H_{A_0} \cap H_0$ is valid, where H_{A_0} is a subgroup of automorphisms of H which convert $A_{G, \mathcal{X}}$ into themselves. By automorphism of the network is meant a permutation on the set of elements of the network such that identified poles of elements are mapped onto identified poles, and permutation of poles of each element onto poles of the element into which it is mapped is permissible. An illustrative example is given. It is noted that the results obtained can be used not only in investigations of homogeneous and iterative media but also in all problems where the need arises

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USSR

UDC 576.851.49.095.5

ABRAMOVA, M. A., Second Moscow Medical Institute imeni Pirogov

"Obtaining Mucous Mutants of *S. typhimurium* LT₂ and Their Properties"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1972,
pp 88-91

Abstract: Mucous mutants of various *S. typhimurium* LT₂ strains (prototrophic, P₂₂, F, and Hfr B3) were obtained by treating the original cultures with N'-nitroso-N'-methylurea at a dose of 1 mg/ml. The culture after incubation overnight was centrifuged to free it from the broth, diluted to a titer of $5 \cdot 10^8$ in citratephosphate buffer at pH 6.0, and treated with the mutagen for 2 hours at 37°C. The treated bacteria were washed from the mutagen, diluted with physiological saline, and inoculated onto dishes with a selective medium. The mucous mutants showed no correlation between filament and mucus formation, on the one hand, and sensitivity to ultraviolet radiation, on the other. There were two groups of mutants differing from each other both in morphology and in the capacity to be induced by different substances, amino acids or sugars.

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2/2 044

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0107136

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE ANTIFRICTIONAL PROPERTIES OF A SYSTEM AG-MOS2 WITH A DIFFERENT CRYSTALLOGRAPHIC ORIENTATION OF THE MOS2 WITH RESPECT TO THE FRICTION SURFACE. IT IS FOUND THAT THIS COMPOSITE MATERIAL EXHIBITS AN ANISOTROPY OF ITS MECHANICAL AND ANTIFRICTIONAL PROPERTIES. IT IS SUGGESTED THAT IN THE FABRICATION OF ANTIFRICTION PARTS MADE OF THIS COMPOSITE, AN ATTENTION MUST BE GIVEN TO THE SELECTION OF THE MOST SUITABLE ORIENTATION OF THE SOLID LUBRICANT.

UNCLASSIFIED

1/2 044 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ANISTROPY OF THE ANTIFRICTION CERMENT MATERIALS WITH A SOLID
LUBRICANT -U-
AUTHOR-(05)-ABRAMOVA, L.S., ALTMAN, A.B., VAYNSHTEYN, V.E., GLUSKIN,
YA.A., MEMELOV, V.L.
COUNTRY OF INFO--USSR

SOURCE--POROSHKOVAIA METALLURGIYA, VOL. 10, FEB. 1970, P 85-89

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SOLID LUBRICANT, ANISOTROPY, CERMET, COMPOSITE MATERIAL,
SILVER, MOLYBDENUM DISULFIDE, ANTIFRICTION MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1939/0589

STEP NO--UR/0226/70/010/000/0085/0089

CIRC ACCESSION NO--AP0107186
UNCLASSIFIED

USSR

UDC 621.382

FEDOTOV, YA. A., SCPOV, O.V., ABRAMOVA, L.I., CHERNYAVSKIY, I.A.

"Investigation Of The Parameters Of Boundary States In Oxide-Semiconductor Structures"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovodn. pribory (Electronic Technology. Scientific-Technical Collection. Semiconductor Devices), 1970, No 1(51), pp 140-151 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B106)

Translation: The density and energy distribution of the boundary states in Si-SiO₂ structures were studied. From a comparison of the theoretical volt-farad dependence, constructed on the basis of the ideal theory of Garretta--Bruttenu, and the experimental volt-farad dependence, the distribution was found of the magnitude of the charge captured by the boundary states as a function of the surface potential of the semiconductor. It is shown that the boundary states have a different energy distribution in the forbidden band of the semiconductor. It is revealed that different technological operations on the MOS structures have an uneven effect on boundary states with a different energy position. 6 ref. Summary.

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USSR

UDC 621.382.322

SOPOV, O.V., ABRAMOVA, L.I., KIRKSEYEV, A.D., NIKONOV, A.S., RYBANOVA, T.R.

"Stabilization of MOS Transistor By Phosphorous Silicate Glass"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovodn. pribory (Electronic Technology. Scientific-Technical Collection. Semiconductor Devices), 1970, Issue 2(52), pp 169-186 (From RZh--Elektronika i yeye primeneniye, No 3, March 1971, Abstract No 3B215)

Translation: The problems are considered of the stabilization of a MOS transistor with an induced p-channel by phosphorous silicate [fosfornosilikatnyy] glass. An investigation is conducted of the effect of the conditions of formation of phosphorous silicate glass on the stability of the device. The existence of optimum conditions for the stabilization process is established. It is possible with the aid of stabilization by phosphorous silicate glass to assure high stability of a MOS transistor during the long-term action of an electrical load and increased temperature of the environment. Summary.

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2/2 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119202

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DETN. OF GLYCEROL (A. C. NEISH, 1952) IS MODIFIED BY THE USE OF ASCORBIC ACID INSTEAD OF ARSENATE FOR THE REDN. OF EXCESS PERIODATE. AFTER 5 MIN INCUBATION OF THE REACTION MIXT. CONTG. 2 ML OF GLYCEROL SOLN., 0.1 ML OF 3N H SUB2 SO SUB4, AND 0.5 ML OF 0.1 M HIO SUB4, 0.5 ML OF 1PERCENT SOLN. OF ASCORBIC ACID WAS ADDED AND THE MIXT. WAS STIRRED FOR 10-15 MIN. CHROMOTROPIC ACID WAS ADDED, THE SAMPLES WERE HEATED ON A BOILING WATER BATH FOR 30 MIN, AND THE ABSORBANCE AT 570 NM WAS MEASURED.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--MODIFIED METHOD FOR DETERMINING GLYCEROL USING CHROMOTROPIC ACID
-U-
AUTHOR--ABRAMOVA, L.A.
COUNTRY OF INFO--USSR
SOURCE--LAB. DELO 1970, (2), 116
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--GLYCEROL, CHEMICAL ANALYSIS, SPECTROPHOTOMETRY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0206 STEP NO--UR/9099/70/000/002/0116/0116
CIRC ACCESSION NO--AP0119202
UNCLASSIFIED

USSR

UDC 632.95

ABRAMOVA, K. A., KHASKIN, I. G., RUDNEV, G. K., SHIRANKOV, D. F.,
SHOMOVA, YE. A., GRIB, O. K., KUPRINA, ZH. S.

"Pesticide"

USSR Author's Certificate No 252756, filed 10 Jul 68, published
12 Feb 70 (from RZh-Khimiya, No 18, 25 Sep 70, Abstract No 18N665 P,
by P. V. Popov)

Translation: Esters of alpha-chlorocinnamic acid with general
formula PhCH=CClC(O)OR (I) ($\text{R} = \text{Me, Et, or Ph}$) exhibit fungicidal
and herbicidal properties. In toxicological experiments I ($\text{R} = \text{Me}$
or Et) suppressed development of colonies of *Alternaria*, *Botrytis*,
Cladosporium, *Penicillium*, *Rhizoctonia*, and *Verticillium* on potato-
dextrose agar in most cases no less vigorously than did figon and
TMTD /tetramethylthiuram disulfide/. As herbicides, I ($\text{R} = \text{Me}$ or
 Ph) act selectively on dicotyledonous plants (beans, sunflower,
buckwheat, beet, and mustard); winter wheat and oats of the cereal
crops are resistant, corn is the most sensitive.

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USSR

UDC 632.95

SHIRANKOV, D. F., ABRAMOVA, K. A., STOLPER, A. L., and KHASKIN, I. G.

"A Herbicide"

USSR Authors' Certificate No 268798, filed 18 Nov 68, published 16 Jul 70
(from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N615 P)

Translation: Butyl ester of dichloroacetic acid introduced into the soil before planting in a dose of 10 kg/ha is proposed as a herbicide for controlling monocotyledonous weeds in fields of dicotyledonous plants (sunflowers, radish, buckwheat, mustard, beets). This herbicide reduced the green mass of monocotyledons by 53-100 percent. Although it is not as effective as sodium trichloroacetate, this weed-killer has the advantage of being safe for the crops mentioned above.

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USSR

UDC 632.954:543.9

ABRAMOVA, K. A., PANASYUK, T. D., and KALININA, Ye. A.

"Determination of Tardon 22-K in Soil and in Plants by the Biological Method"

Moscow, Khimiya v Sel'skom Khozyaistve, No 4, 1973, pp 58-60

Abstract: The content of tardon 22-K (3,5,6-trichloro-4-aminopicolinic acid) in soil and in plants was determined by the change of the area of smooth margin leaf of bean plants. The sensitivity of this test is 0.003-0.004 mg/kg for the determination of the content of tardon in soil; in plants the sensitivity depends on the volume of the composted sample. It has been established that the concentration of tardon in the straw of winter wheat was several fold higher than in the soil.

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3/3 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109481

ABSTRACT/EXTRACT--THE MAIN CONDITIONS FOR ERADICATION AND REDUCTION OF THE INCIDENCE OF HELMINTHIC DISEASES IN THE TRANSCAUCASIAN REPUBLICS INCLUDE, FIRST OF ALL, IMPROVEMENT IN THE ORGANIZATION OF HELMINTHIC DISEASE CONTROL MEASURES WITH ENLISTING OF COOPERATION OF THE GENERAL MEDICAL NETWORK, IMPROVEMENT IN THE GUIDANCE OF THIS WORK ON THE PART OF PUBLIC HEALTH MINISTRIES AND CHIEF PHYSICIANS OF DISTRICTS, DETECTION AND SANITATION OF ALL PATIENTS WITH TAENIARHYNCHOSIS, PARTICULARLY AMONG CATTLE BREEDERS, INTRODUCTION OF LABELLING AND VITAL DIAGNOSIS OF MEASLES IN CATTLE IMPROVEMENT OF VETERINARY AND SANITARY CONTROL IN PLACES OF CATTLE SLAUGHTER, MARKED IMPROVEMENT IN THE SANITARY CONDITIONS OF VILLAGES AND CATTLE BREEDING FARMS, IMPROVEMENT OF SANITARY EDUCATION OF THE POPULATION, DETECTION AND SANITATION OF ALL MICROFOCI OF HOOKWORM DISEASES, SANITATION OF MICROFOCI OF ASCARIDIASIS PARTICULARLY IN INTENSIVE FOCI. FACILITY: GLAVNOYE SANITARNO-EPIDEMIOLOGICHESKOYE UPRAVLENIYE MINISTERSTVA ZDRAVOOKHRANENIYA SSSR. FACILITY: INSTITUT MEDITSINSKOY PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. YE. I. MARTSINOVSKOGO MINISTERSTVA ZDRAVOOKHRANENIYA SSR, MOSCOW.

UNCLASSIFIED

2/3 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109481

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DECREE OF THE USSR MINISTRY OF PUBLIC HEALTH NO. 230 OF MARCH 20, 1967 PROVIDES FOR A NUMBER OF MEASURES FOR INCREASING THE PACE OF ERADICATION AND REDUCTION OF INCIDENCE OF A NUMBER OF INFECTIOUS AND PARASITIC DISEASES IN THE SOVIET UNION. FROM YEAR TO YEAR THE RANGE OF EXAMINATIONS OF THE POPULATION FOR DETECTION OF HELMINTHIC DISEASES INCREASES IN THIS COUNTRY. THE AMOUNT OF WORK DONE FOR CONTROL OF HELMINTHIC DISEASES HAS INCREASED SIGNIFICANTLY IN REPUBLICS OF THE TRANSCAUCASUS WHICH, ALONGSIDE WITH INCREASING OF MATERIAL WELFARE OF THE PEOPLE, IMPROVEMENT OF THEIR SANITARY CULTURE, CONTINUOUSLY IMPROVING SANITARY CONDITIONS OF INHABITED AREAS RESULTED IN 1967 IN 2.1 FOLD REDUCTION IN THE INCIDENCE OF HELMINTHIC DISEASES IN THE POPULATION OF THE AZERBAIJAN AND THE ARMENIAN SSR, AND 2.8 FOLD REDUCTION IN THE GEORGIAN SSR AS COMPARED WITH THE LEVEL OF INCIDENCE IN 1950. EVEN THOUGH AS A RESULT OF MUCH WORK DONE IN SANITATION OF THE POPULATION FROM TAENIARHYNCHOSIS AND ASCARDIASIS THE INCIDENCE OF THESE HELMINTHIC DISEASES HAS BEEN REDUCED SEVERAL TIMES, IT IS STILL MUCH HIGHER THAN THE AVERAGE INDEX FOR THE SOVIET UNION. THE INCIDENCE OF HOOKWORM DISEASES IN THE POPULATION OF THE AZERBAIJAN SSR AND PARTICULARLY OF THE GEORGIAN SSR IN 1967 ALSO REDUCED SEVERAL TIMES AS COMPARED WITH THAT IN 1959, BUT ERADICATION OF THIS HELMINTHIC DISEASE REQUIRES STILL MUCH WORK TO BE DONE.

UNCLASSIFIED

1/3 014 UNCLASSIFIED **A** PROCESSING DATE--13NOV70 **2**
TITLE--SITUATION WITH TAENIARHYNCHOSIS, HOOKWORM DISEASES AND ASCARIDIASIS
IN TRANSCAUCASIAN REPUBLICS AND MEASURES NECESSARY FOR ERADICATION AND
AUTHOR--(05)--POPOV, V.F., SHULMAN, YE.S., PROKOPENKO, L.I., ABRAMOVA, I.G.,
LOPUKHINA, N.G.
COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLENI, 1970, VOL
39, NR 2, PP 180-188
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DISEASE CONTROL, PARASITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1419

STEP NO--UR/0358/70/039/002/0180/0188

CIRC ACCESSION NO--AP0109481

UNCLASSIFIED

USSR

UDC 539.3

ABRAMOVA, G. YA.

"Constrained Torsion of an Incompletely Built-in Cantilever Box"

Moscow, Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 193-197

Abstract: The structure being analyzed consists of a box shape beam with reinforcing angle bars in the corners. These angle bars extend outside the box-beam on one end to a fixed plane. A torque is applied to the free end of the box-beam.

The solution for the box-beam completely built-in on one end is taken from another source.

The effect of the incomplete building-in is analyzed.

The graphs of shear stresses in the vertical and horizontal sides of the box along the length of the beam are given.

UDC 632.95

USSR

MANDEL'BAUM, Ya. A., ABRAMOVA, G. L., GOLEVLEVA, L. M., FEDOSEYENKO, L. G.,
ANDREYEVA, Ye. I., and PRONCHENKO, T. S.

"Fungicides"

USSR Author's Certificate No 254254, Filed 8 Jul 68, Published 13 Mar 72
(from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom (I, L-S), No 1(11),
1973, Abstract No 1N490P by T. A. Belyayeva)

Translation: Compounds of a general formula $(RO)R'HNP(S)SR''$ (I) ($R_1 = C_1 - C_3$ -alkyl or chloralkyl, R' and $R'' = C_1 - C_4$ -alkyl) are suggested for use as fungicides. They were tested on pure cultures of phytopathogenic fungi and gummosis bacteria. The LD₅₀ for rice weevil of these compounds was determined. Compounds I are toxic for fungus mycelium, and compounds $(EtO)PrHNP(S)SPr$ and $(PrO)PrHNP(S)SPr$ (Ia) are effective against Verticillium cotton wilt and their increase the cotton yield 1.5 times.

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USSR

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SHAPIRO, A. Ya., and others. The effect of the composition of the steel on the formation of the seam. In: "Seam Zone Phase Composition of Steel. Part II". Moscow, Institute of Sciences USSR.

"Seam Zone Phase Composition of Steel. Part II".

Kiev, Avtomaticheskaya Svyaz', No. 10, Dec. 70, pp. 1-3.

Abstract: A description is given of experiments performed to determine the effect of the processes responsible for the enrichment of the steel with carbon during the seam. These experiments have shown that the carbon content of the steel increases in the deposit precipitates after treatment in a solution of ammonium chloride. The enrichment is maximal in the case of a steel with a low carbon content. The course of an hour in an electrolyte made up of 10 g of ammonium chloride and 100 ml of ammonia chloride solution. The current density is 10 A/cm². The enrichment was 0.15 wt.%. The composition of the precipitate was determined by X-ray diffraction with a photostudy in terms of a standard library. The results were confirmed by the microdiffraction method, and the data were used to determine the effect of the detection of the enrichment of the steel. The results show that the enrichment of the steel with carbon during the seam is due to the enrichment of the steel with carbon during the seam. The results show that the enrichment of the steel with carbon during the seam is due to the enrichment of the steel with carbon during the seam.

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USSR

UDC:669.046.558.7

PEGOV, V. G., ANISIMOV, M. Ye., SHIRER, G. B., ABRAMOVA, A. A., KOMEL'KOV, V. K., MOLCHANOVA, A. A., VOINOV, S. G., SHALIMOV, A. G., and PRONICHKIN, A.A.

"Influence of Deoxidation of Metal With Silicocalcium and Addition of Soda to Synthetic Slag on Contamination of Type ShKh15 Steel With Nonmetallic Inclusions"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 215-226

Translation: When type ShKh15 steel is made in 100-T electric furnaces with treatment by synthetic slag in the ladle, the addition of 2.5-3.0% calcinated soda allows the content of oxygen in the steel to be reduced by 25% and the contamination with sulfides, oxide, and globular inclusions to be significantly reduced. Deoxidation of ShKh15 steel with silicocalcium 2.0-2.5 kg/t with simultaneous processing with synthetic slag decreases the content of sulfides and oxides, but causes an increase in the content of globular inclusions in the steel. 3 tables; 5 biblio. refs.

1/1

2/2 037

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124845

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. ANALYTICAL STUDY OF THE PROBLEM OF CALCULATING THE SLIP COEFFICIENTS OF A GAS AT A SURFACE. SOLUTIONS ARE OBTAINED FOR THE LIMITING CASE OF AN ISCTROPIC SCATTERING OF MOLECULES AT THE WALL AND FOR THE LIMITING CASE OF A NEAR SPECULAR SCATTERING LAW. IT IS SHOWN THAT THERE EXISTS AN EXPLICIT RELATIONSHIP BETWEEN THE TEMPERATURE SLIP COEFFICIENT AND THE ISOTHERMAL SLIP COEFFICIENT. IF THE PRESSURE GRADIENT IS TAKEN INTO ACCOUNT, THE VALUE OF THE TEMPERKATURE SLIP IS PROPORTIGNAL TO THE DERIVATIVE OF A CHAOTIC MOLECULAR FLOW.

UNCLASSIFIED

172 037 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--FLOW OF A RAREFIED GAS NEAR A NONUNIFORMLY HEATED SURFACE -U-

AUTHOR--(02)-ABRAMOV, YU.YU., GLADUSH, G.G.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIYA NAUK SSSR, IZVESTIYA, MEKHANIKA ZHIDKOSTI I GAZA,
MAR.-APR. 1970, P. 20-29
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GAS FLOW, RAREFIED GAS, MOLECULAR KINETICS, SURFACE PROPERTY,
CONDUCTIVE TRANSFER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1191

STEP NO--UR/0421/70/000/000/0020/0029

CIRC ACCESSION NO--AP0124845
UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--27NOV70
CIRC ACCESSION NO--AP0135965
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. QUICK ACTING AUTOMATIC RECLOSING
SCHEMES, USED IN ELECTRICAL POWER SYSTEMS, ARE REVIEWED AND THE
CONDITIONS UNDER WHICH THEY MAY BE USED, ARE ANALYZED. THE RELIABILITY
CHARACTERISTICS OF THESE SCHEMES AND TIMING DIAGRAM ARE GIVEN.
RECOMMENDATIONS ARE MADE FOR MAINTENANCE, FOR THE SPEEDING UP OF
PROTECTION AFTER AUTOMATIC RECLOSURE AND THE RELAY REQUIREMENTS FOR
EVENTUAL SWITCHING OUT OF THE CIRCUIT.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--QUICK ACTING AUTOMATIC RECLOSING SCHEMES AND THEIR MAINTENANCE -U-
AUTHOR--ABRAMOV, YU.V. *A*
COUNTRY OF INFO--USSR
SOURCE--ELEKT. STANTSII (USSR), VOL. 41, NO. 3, P. 82-3 (1970)
DATE PUBLISHED-----70

SUBJECT AREAS--ENERGY CONVERSION (NON-PROPULSIVE), MECH., IND., CIVIL AND
MARINE ENGR
TOPIC TAGS--ELECTRIC SWITCHGEAR, ELECTRIC NETWORK, AUTOMATIC CONTROL
SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0502 STEP NO--UP/0104/70/041/003/0082/0083
CIRC ACCESSION NO--AP0135965
UNCLASSIFIED

USSR

UDC 621.396.6.019.34

ABRAMOV, YU. S., CHIRKOV, V. G.

"Determination of the Reliability of Functional Modules of Radio Equipment by Simulation on a Digital Computer"

Sb. nauch. soobshch. Radiotekhn. fak. Dagestan. un-t (Collected Scientific Reports. Radio Engineering Department. Dagestan University), 1970, No 1, pp 3-17 (from RZh-Radiotekhnika, No 10, Oct 71, Abstract No 10V273)

Translation: The application of the method of statistical tests for estimating the reliability of radio equipment on a digital computer is demonstrated in the example of a device with scanning. The reliability is determined by gradual and sudden failures of the amplitude calibrator, the time calibrator and the sweep oscillator of the SI-16 oscillograph. The reliability characteristics obtained compare with the results of natural tests of the investigated units.

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EQUIPMENT
Aeronautical

USSR

UDC: None

ABRAMOV, Ye. I., BROTSKIY, A. N., BURTSEV, V. A., ZATOLOKIN, A. S.,
ZUBKOVA, T. I., and SMIRNOV, N. P.

"Hydraulic Damper for an Aircraft Flutter Model"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye
znaki, No 27, 1971, p 119, No (11)351001

Abstract: The body of this device contains a rotor with a controlling valve and a charge-compensating device. By having this device in the form of an elastic membrane which converts into a sealing ring between the body and a hood filled with a transparent material, the size and weight of the damper can be reduced. A cross sectional drawing of the device is shown.

2/2 014

UNCLASSIFIED

PROCESSING DATE--09UCT70

CIRC ACCESSION NO--AN0103352 .

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE REVIEWS A MONOGRAPHY, "PLANNING RESEARCH AND EXPERIMENTAL DESIGN WORK" PLANIROVANIYE NAUCHNO ISSLEDOVATELSKIKH I OPYTNO KONSTRUKTORSKIKH RABOT, AUTHORED BY M. L. BASHIN AND PUBLISHED BY "EKONOMIKA", M., 1969. ONE CHAPTER OF THE BOOK DEALS WITH THE LONG RANGE FORECAST OF SCIENTIFIC AND TECHNICAL PROGRESS. ACCORDING TO ABRAMOV'S FIGURES, THE SOVIET UNION TODAY HAS NEARLY 6,000 RESEARCH INSTITUTES AND DESIGN BUREAUS.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--PLANNING SCIENCE -U-
AUTHOR--ABRAMOV, YU. *A*
COUNTRY OF INFO--USSR
SOURCE--SOTSIALISTICHESKAYA INDUSTRIYA, MAY 19, 1970, P 3, CULS 3-5
DATE PUBLISHED--19MAY70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES
TOPIC TAGS--R AND D PLANNING, LONG RANGE R AND D PLANNING, R AND D
FORECASTING, SCIENTIFIC INSTITUTE, DESIGN BUREAU

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1986/1562 STEP NO--UR/0533/70/000/000/0003/0003
CIRC ACCESSION NO--AN0103352
UNCLASSIFIED

USSR

ABRAMOV, Yu., Physician

"Pain Conquered by Electricity"

Yerevan, Kommunist, 22 Nov 70, p 4

Abstract: The phenomenon of electroanesthesia is being analyzed at the First Moscow Medical Institute. The object of the study is the complete removal of pain without any side effects through application of an electric current during surgical operations. High-frequency currents applied to the head of the patient cause a certain interaction in the depth of the brain, forming low-frequency currents which produce electroanesthesia. At the laboratory of Academician Petr Anokhin, it has been established that aminazine blocks the electrical reaction of the cortex to pain without intervening in the action of other stimuli of the cortex. Excitation of certain deep structures in the brain which are especially sensitive to electric current leads to blocking of the reaction of the cortex to pain.

1/1

USSR

UDC 669.71.053.4.094

AKSEL'RUD, G. A., ABRAMOV, V. YA., REYFMAN, E. D., SEMENISHIN, YE. M.,
DUDKO, T. A.

"Mathematical Model of the Diffusion Counter Flow Process of Leaching Alumina-Containing Cakes"

Tr. Vses. n.-i. i proyekt. in-ta alyumin., magn. i elektrod. prom-sti
(Works of the All-Union Scientific Research and Planning and Design Institute of Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 96-102 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G137)

Translation: A mathematical model of the diffusion counter-flow process of leaching large-fraction cakes is proposed. A method and an example of calculating the diffusion counter-flow process of leaching bauxite cakes in a percolation unit are presented. There are 3 illustrations and 1 table.

USSR

UDC 669.71.053.4.094

AKSEL'RUD, G. A., ABRAMOV, V. YA., DUDKO, T. A., REYFMAN, E. D., SEMENISHIN, YE. M.

"Kinetics of Leaching Bauxite Cakes"

Tr. Vses. n.-i. i proyekt. in-ta alumin., magn. i elektrod. prom-sti
(Works of the All-Union Scientific Research and Planning and Design Institute of Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 91-95 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 46140)

Translation: The kinetics of extracting sodium aluminate from various fractions of bauxite cakes in the 45-95° temperature range are investigated. The diffusion coefficients of sodium aluminate are determined, and their dependence on the temperature variation is found. The characteristics of the mechanism of leaching of the cakes are established. The values of the diffusion coefficient found in this study can be used when calculating counterflow processes and equipment. There are 3 illustrations and 1 table.

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USSR

UDC 669.71.053.4.094

AKSEL'RUD, G. A., ABRAMOV, V. YA., REYFMAN, E. D., SEMENISHIN, YE. M., GUMNITS-KAYA, N. A.

"Extraction of Sodium Aluminate in Capillary Models"

Tr. Vses. n.-i. i proektn. in-ta alyumin., magn. i elektrodn. prom-sti
(Works of the All-Union Scientific Research and Planning and Design Institute of Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 85-90 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G142)

Translation: Results are presented from a study of the process of extracting sodium aluminate by solutions of various concentration at temperatures of 60, 75, and 95°. The values of the diffusion coefficient of sodium aluminate are calculated on the basis of processing the experimental data. An explanation is presented for the nature of variation of the magnitudes of the diffusion coefficients based on the $\text{Na}_2\text{O}-\text{Al}_2\text{O}_3-\text{H}_2\text{O}$ system. There are 3 illustrations and 1 table.

1/1

USSR

UDC 669.71.053.4.094(038.8)

BORZENKO, V. V., ABRAMOV, V. YA., POLOVNIKOV, B. A.

"Discharge Unit"

USSR Author's Certificate No 276025, Filed 11 Jun 69, Published 6 Oct 70
(from RZn-Metallurgiya, No 4, Apr 71, Abstract No 4G146P)

Translation: A design is proposed for an unloading device for a tubular leacher made in the form of a single-or double-bucket elevator. To lower the removal of thin fractions of sludge with solution, the elevator bucket is equipped with a cylindrical chute, and a partition is installed in front of the bucket which does not reach to the bottom of the elevator barrel. There are 2 illustrations.

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USSR

UDC 669.71.053.4.094

AKSEL'RUD, G. A., ABRAMOV, V. YA., SEMENISHIN, YE. M., REYFMAN, E. D., SADOVOY, G. T.

"Kinetics of Extraction of Alkali from Sodium Ferrite"

Tr. Vses. n.-i. i provektn. in-ta alumin., magn. i elektrodn. prom-sti
(Works of the All-Union Scientific Research and Planning and Design Institute of Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 82-84 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G143)

Translation: A study was made of the kinetics of extracting Na_2O under various temperature conditions during decomposition of sodium ferrite by water as applied to leaching bauxite cakes. The limiting stage of the given process is established, and values of the diffusion coefficients are determined. There is 1 table.

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USSR

ABRAMOV, V. V., et al., Fizika i Khimiya Obrabotki Materialov, No. 4, Jul-Aug 70, p pp 107-113

site. 2. Thermal fluctuations, resulting in the metal atom at some moment in time acquiring energy adequate for breaking the bonds with oxygen. An important consequence of plastic deformation behavior for materials to which cyclic external loads are applied is that any variation in the rate of plastic deformation of the materials being combined during their solid-state welding by pressure with heating must vary the rate of buildup of physical contact and conditions for activation of atoms of the surfaces being combined.

USSR

A
UDC 621.791.1ABRAMOV, V. V., KARAKOZOV, E. S., and PETROV, V. A., Moscow

"Kinetics of Compound Formation in Welding in the Solid State by Static and Cyclic Loading with Heating"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 4, Jul-Aug 70, pp 107-113

Abstract: Formation of a compound in solid-state welding, when the driving forces are temperature and pressure, occurs at active centers by plastic deformation in new main stages: 1) formation of physical contact, and 2) activation and chemical reaction. This process can be represented as a chemical reaction due to which energetically stable configurations of electrons belonging to unexcited atoms deep in the solid form between atoms of the uniting surfaces. In bringing together surfaces being united, each of which has no oxide layer, but has a multiatomic chemically adsorbed layer of ambient environment atoms, for example, oxygen (i.e., consists of an electrically neutral adsorption complex (Me-O)), at some distance equilibrium of molecular (van der Waals) forces of repulsion and attraction will be established. Processes ensuring these conditions for solid-state welding, when the total energy level of the system of surface atoms rises via thermal and mechanical activation, can be: 1) Surfacing into the physical contact zone of crystal lattice defects. Energy freed when defects surface can prove adequate for rupture of bonds in the Me-O complexes in the region adjoining the defect surfacing

1/2

AA0040728

AUTHORS: Abramov, V. V.; Nikolayev, O. B.; Makarenko, A. K.; and
Simkov, A. I.

19750382

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AA0040728-

A

Abramov, V. V.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-70

242337 INGOT MOULD increases the thickness of the band for rim and makes it from steel with higher yield limit in order to prevent clearances forming between it and the mould body. The band is also crimped in order to prevent plastic strain occurring. In each mould the radius of the crimp of the band is selected so that $\Delta l_n = \Delta l_6$, thus for any one material used for the band, there will be maximum pressure between it and its mould. As the mould is teemed, the band deforms simply by straightening out its crimps. The crimp gradually becomes less curved and there is a rise in the stress in the band, pressure between this and the mould also rising.

21.12.66 as 1120047/22-2. ABRAMOV, V. V. et al (2.9.69)
Bul 15/25.4.69. Class 31b². Int. Cl. B 22d.

1/2

18

20

19750381

Antennas

USSR

UDC 538.576.3:538.574.6

KAPLUN, V. A., ABRAMOV, V. V.

"Diffraction of Electromagnetic Waves by a Grid of Cylindrical Wires"

Moscow, Radiotekhnika i Elektronika, vol 16, No 11, Nov 71, pp 2038-2047

Abstract: A solution is found for the problem of diffraction of an electromagnetic wave incident at an arbitrary angle and arbitrary orientation of the polarization vector on a flat grid of cylindrical wires with a triangular cell shape. Account is taken in the solution of the interaction between the systems of parallel wires which make up the triangular grid. Experimental data are given which confirm the validity of the theoretical assumptions. Two examples are given. Three figures, bibliography of four titles.

USSR

UDC 621.791 011

ABRAMOV, V. V., BYCHKOVA, Z. S., MESHCHERYAKOV, V. N., and SHORSHOROV,
M. KH., Moscow

"Kinetics of Surface Chemistry of the Localized Chemical Reaction Between
Copper and Nickel in the Solid Phase During Welding"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 4, Jul/Aug 72, pp 96-101

Abstract: Fractographic analyses of the surfaces of reactions between copper and nickel in solids subjected to heat and pressure have shown that, in metals having very different resistances to plastic deformation, there is an increase in the bonding strength due to the deformation of microdendrites. The kinetics of the increase in the bonding strength closely follow the kinetic plastic deformation of the microdendrites of nickel. The relative size of the increase in strength may be approximated from the amount of deformation of the microdendrites or of the contact surfaces of the microdendrites on the welding surfaces of nickel.

USSR

ZOLOTUKHIN, I. V., et al., Problemy Prochnosti, No 9, Sep 73, pp 86-89

values are on the average 17-23% smaller than at room temperature. 4 figures.
1 table. 14 references.

USSR

UDC 539.4

ZOLOTUKHIN, I. V., AKININ, K. G., ABRAMOV, V. V., KETUSOV, Yu. K.,
SKOROBOGATOV, V. S., and SVEDOMTSEV, N. V. (Voronezh)

"Investigation of the Damping and Elastic Characteristic of Plasma Coatings
of Tungsten, Nichrome, Zirconium Dioxide, and Chrome-Nickel Spinel"

Kiev, Problemy Prochnosti, No 9, Sep; 73, pp 86-89

Abstract: Consideration is given to problems connected with study of the damping and elastic characteristics of thin plasma coatings. The influence of the conditions of application and annealing of the coatings upon the value of oscillation attenuation and the modulus of elasticity. The results of investigation of the modulus of elasticity are presented in a table and in three figures. For tungsten coatings, the modulus of elasticity is characterized by considerable scattering of the values -- from $2 \cdot 10^5$ kg/cm² to $14 \cdot 10^5$ kg/cm².

The relationship of the modulus of elasticity of the coatings to the temperature, before and after annealing, is shown. Analysis of the $E - t$ relationships of tungsten and zirconium dioxide coatings shows that in the temperature interval from 20 to 800°C the values of the elasticity modulus E change insignificantly (within the limits of 2-10). For nichrome coatings E decreases more intensively with a temperature rise, and at $t = 800^\circ\text{C}$ its $1/2$

USSR

UDC 547.26.118.07

CHEKHOVSKIKH, M. I., TARASOVA, R. I., and ABRAMOV, V. S.

"A Method of Synthesizing Ethyl Ether of β -Aminoethylphosphoric Acid"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 14, 1970, Author's Certificate No 268422, filed 22 Jul 68, p 24

Abstract: This Author's Certificate introduces: 1. A method of synthesizing ethyl ether of β -aminoethylphosphoric acid. As a distinguishing feature of the method, the process is simplified by interacting 0,0-diethyl-o, β -chloroethyl phosphate with ammonia in an autoclave with the application of heat. 2. The method described in (1) is distinguished by the fact that the temperature reaches 65-70°C.

USSR

UDC: 621.375.018.756(088.8)

ABRAMOV, V. S.

"A Pulse Amplifier"

USSR Author's Certificate No 265191, filed 25 Apr 68, published 23 Jun 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12D121 P)

Translation: This Author's Certificate introduces a pulse amplifier which contains an emitter follower and limiters. As a distinguishing feature of the patent, voltage scatter is reduced and the reliability of information obtained at the output is improved by connecting the collector of the transistor in one of the preamplification stages simultaneously through corresponding capacitors to the base of the transistor in the emitter follower and to a grounded network made in the form of a diode and resistor connected in series and shunted by a resistor. The base of the transistor in the prefinal stage is connected to a ground bus through a diode and resistor connected in series, the capacitor from the emitter follower being connected between them. Resumé.

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- 4 -

USSR

UDC 547.26'118

ABRAMOV, V. S. (deceased), and IL'INA, N. A.

"Reactions of Amidophosphite Esters. XVI. Reaction of Amidophosphite Esters with Polyhalohydrocarbons"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 1, Jan 71, pp 100-103

Abstract: The course of the reaction of amidophosphite esters with polyhalohydrocarbons depends not only on the number of amido groups in the ester-amides, but also on the reactivity of the halogen in the polyhalohydrocarbons. Carbon tetrachloride reacts with amidophosphites with liberation of large amounts of heat. The reaction of alkylamides of dialkylphosphorous acids with carbon tetrachloride yields mainly ester-amides of trichloromethylphosphonic acid, as well as alkyl halides and mixed chloroamidophosphates. Bis-dialkylamides of alkylphosphorous acids react with carbon tetrachloride more energetically than ester-amides of dialkylphosphorous acids to give acid chlorides of bis-dialkylamides of phosphoric acid and trichlorohydrocarbons. Chloroform reacts with bis-dialkylamides of alkylphosphorous acids to give an alkyl halide and an dialkylamide of dichloromethylphosphonic acid and the acid chloride of bis-dialkylamide of phosphoric acid. Hexachlorocyclopentadiene reacts with ester-amides of phosphorous acids to give the acid chloride of bis-dialkylamide of phosphoric acid and 5-alkylpentachlorocyclopentadiene.

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USSR

UDC 621.375.82

ABRAMOV, V. S., KOBZEV, V. V., MOMA, Yu. A., NEVSKIY, M. V.

"Semiconductor Laser Diode-Modulator for Gas Laser Emission"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works),
No. 2, Moscow, "Sov. radio", 1972, pp 96-98 (from RZh-Fizika, No 10,
Oct 72, Abstract No 10D997)

Translation: The possibility of modulation of gas laser radiation by a semiconductor laser diode with simultaneous amplification of the power of the modulated emission is shown experimentally. Pulse modulation of the radiation of an Ar-O₂ gas laser was achieved with a GaAs diode with coated and uncoated faces. The power of the radiation passing through the diode rose in a pulse by a factor of 7-10 (pure amplification). Heating of the active region of the diode leads to distortion of the peak of the modulated pulse. Limitations on the duration of the pulse due to this effect are calculated. 10 ref. Authors abstract.

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- 35 -

USSR

UDC: 621.378.324+621.378.334

ABRAMOV, V. S., KORZEV, V. V., MOMA, Yu. A., KEVSEIN, M. V.

"Semiconductor Laser Diode as a Modulator of Gas Laser Emission"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 2(8), 1972,
pp 96-98

Abstract: Experimental proof is given for the feasibility of modulating gas laser emission by using a semiconductor laser diode with simultaneous amplification of the power of the modulated emission. Argon-oxygen gas laser pulse emission was modulated by a gallium arsenide diode with both coated and uncoated optical faces. The power of the emission passed through the diode increased in the pulse by a factor of 7-10 (pure amplification). Heating of the active region of the diode led to distortion of the vertex of the modulated pulse. Estimates are made of the limitations on pulse duration due to this effect. One illustration, bibliography of ten titles.

1/1

- 47 -

USSR

A UDC: 521.372.837(088.8)

VAMBERSKIY, M. V., ABRAMOV, V. P., MAKAROV, V. K.

"A Ferrite Strip Switch"

USSR Author's Certificate No 250232, filed 19 May 67, published 16 Jan 70 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7B183 P)

Translation: The proposed switch is based on a five-arm strip circulator with one input arm and four output arms. One pair of output arms is isolated, and the other pair divides the input signal into two parts with a phase shift of 180° in one arm as compared with the other. In the ferrite discs of conventional Y-circulators, the distribution of the electric and azimuthally magnetized fields is such that in addition to the field minimum lying in the region of the isolated arm, there is another minimum diametrically opposite from the first. Diametrically opposite from the output arm is an electric field with the same value as the field in this arm, which is in phase with the input value of the field and 180° out of phase with the output value. This makes it possible to connect two additional arms to the conventional Y-circulator at an angle of 60° to the axis of the input arm. This design extends the functional possibilities of the channel. Two illustrations. A. K.

1/1

2/2 024

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0132320

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TECHNICAL CHARACTERISTICS AND USES OF SILICON STABILIZERS ARE DESCRIBED. THE SOVIET INDUSTRY PRODUCES SILICON STABILIZERS WITH THE FOLLOWING CHARACTERISTICS: RATED STABILIZATION VOLTAGE FROM 3 TO 200 V, POWER MINUS 280 MW, AND RELATIVE TEMPERATURE COEFFICIENT UP TO 0.001 PERCENT-DEGREE C. THE USE OF SILICON STABILIZERS IS NOT LIMITED TO VOLTAGE STABILIZATION APPLICATIONS. THEY CAN ALSO BE USED IN VARIOUS CONTROL SYSTEMS, COMMUNICATION, AND RADIO EQUIPMENT. IN ADDITION TO SILICON STABILIZERS THE SOVIETS STARTED IN RECENT YEARS TO PRODUCE SELENIUM STABILIZERS. THE USE SELENIUM STABILIZERS IS MOST ADVANTAGEOUS IN PORTABLE DEVICES WITH LOW POWER SOURCES, AND IN SYSTEMS WITH FEED VOLTAGE NOT EXCEEDING 9-12 V.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SILICON STABILIZERS -U-
AUTHOR--ABRAMOV, V.M.
COUNTRY OF INFO--USSR A
SOURCE--MOSCOW, AVTOMATIKA, TELEMEXHANIKA I SVYAZ, NO 2, 1970, PP 12-15
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., NAVIGATION
TOPIC TAGS--VOLTAGE STABILIZER, SILICON PROPERTY, SELENIUM, CONTROL SYSTEM
STABILITY, COMMUNICATION SYSTEM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0020 STEP NO--UR/0223/70/000/002/0012/0015
CIRC ACCESSION NO--AP0132320
UNCLASSIFIED

USSR

UDC: 621.398.694.3:538.652

ABRAMOV, V. M., BARSKIY, B. R., VERTUSHKIN, B. A., GOLOVIN, V. V.,
~~ZORIN, V. M.~~, KRINKIN, A. A.

"A Pneumatic Computer"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 8, Mar 71, Author's Certificate No 296091, division G, filed 17 Oct 68,
published 12 Feb 71, p 148

Translation: This Author's Certificate introduces a pneumatic computer which contains a single-diaphragm element with two nozzles which are coaxial with each other in the flow chamber of the element. The dead-end chamber of the element is connected to a multiplicand pressure source, and the inner nozzle is connected through a choke to a multiplier pressure source and directly to the output channel of the device, the annular channel formed by the nozzles being open to the atmosphere. As a distinguishing feature of the patent, the functional possibilities of the computer are extended by connecting the flow chamber of the element through a choke to a divisor pressure source.

USSR

UDC 518.5:681.3.06

ABRAMOV, V. I., FROLOV, G. D.

~~Automatic Editing~~
"Automatic Editing"

Tsifr. Vychisl. Tekhnika i Programmir. [Digital Computer Equipment and Programming -- Collection of Works], No 6, Moscow, Sovetskoye Radio Press, 1971, pp 48-54, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V636 by the authors).

Translation: An algorithm is presented which approximately solves the problem of automatic transfer of a portion of a word recorded in the Russian alphabet from one line to the next. Results are presented from machine experiments indicating the high reliability of the suggested transfer method.

USSR

UDC 620.172.22

ABRAMOV, V. I., LOKSHIN, I. Kh, and PISKAREV, V. D.

"Experimental Comparison of Various Methods for Determining the Limit of Elasticity"

Moscow, Zavodskaya Laboratoriya, Volume 6, 71, p 120

Abstract: Metal plates were tested for elasticity by bending, using different techniques. A special electrical apparatus invented by Piskarev (Declaration No. 251231) was used to measure residual deformation with high accuracy. Results indicated good agreement among the various standard methods used; the values obtained for limit of elasticity were quite close, even though the procedures differed significantly.

1/1

USSR

ZOZ, N. N., et al., Tsitologiya i Genetika, Vol 5, No 6, Nov/Dec 71, pp 497-499

N-nitrosoethylurea in inducing dominant mutations may be related to the fact that nitrosoalkylureas, as has been shown in in vitro experiments, introduce a carbamoyl group into DNA besides acting as alkylating agents.

Genetics

USSR

UDC 575.23.633.11:547

ZOZ, N. N., SEREBRYANNYY, A. M., and ABRAMOV, V. I., Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Dominant Mutations in Chemical Mutagenesis"

Kiev, Tsitologiya i Genetika, Vol 5, No 6, Nov/Dec 71, pp 497-499

Abstract: The effects of the mutagens N-nitrosoethylurea, N-nitroso-N-ethylurethan, N-nitroso-N-methyl-N'-nitroguanidine, ethyl methanesulfonate, and N-nitrosopiperazine on seeds of the soft winter wheat variety Belotserkovskaya-198 were studied. N-nitropiperazine was investigated for the first time. All the mutagens studied had approximately the same effect as far as the frequency of recessive mutations induced by them was concerned (50-60 percent mutant families in M₂), but their capacity to induce dominant mutations differed widely. The most active substance in inducing dominant mutations was N-nitrosoethylurea, which in its optimum concentration (0.05 percent) produced a ratio of the frequency of dominant to recessive mutations of 1 : 2.5. N-nitrosopiperazine, while inducing a high frequency of recessive mutations manifested in M₂, did not induce any discernible mutations in M₁. The other mutants tested occupied intermediate positions with respect to the ratio of dominant to recessive mutations. The high activity of 1/2

2/2 023

UNCLASSIFIED

PROCESSING DATE--02JCT70

CIRC ACCESSION NO--AP0102670

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT VARIOUS DATES AFTER CORNEAL GRAFTING THE AUTHOR STUDIED THE MORPHOLOGICAL PICTURE OF 19 HUMAN HOMOTRANSPLANTS AND 19 XENOTRANSPLANTS, GRAFTED TO RABBITS AND DOGS. A CONCLUSION IS DRAWN THAT AS A MORPHOLOGICAL SUBSTRATE OF TISSULAR INCOMPATIBILITY IN KERATOPLASTY APPEARS A ROUND CELL, LARGELY LYMPHOCYTIC, INFILTRATION OF THE TRANSPLANT AND SURROUNDING TISSUE OF THE RECIPIENT, JUST AS IT IS SEEN TO OCCUR IN TRANSPLANTATION OF OTHER TISSUES AND ORGANS.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--MORPHOLOGICAL SUBSTRATE OF TISSULAR INCOMPATIBILITY IN KERATOPLASTY
-U-
AUTHOR--ABRAMOV, V.G. *A*
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OFTAL'MOLOGII, 1970, NR 2, PP 11-14
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HOMOTRANSPLANT, CORNEA, MORPHOLOGY, RABBIT, DOG, LYMPHOCYTE,
TISSUE REJECTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
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STEP NO--UR/0357/70/000/002/0011/0014

CIRC ACCESSION NO--AP0102670

UNCLASSIFIED

2/2 042

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116853

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CALORIMETRIC METHOD IS DESCRIBED FOR DETN. OF KINETICS OF THE THERMAL DECOMP. OF DINITROXYDIETHYLNITRAMINE WHEN REACTION PRODUCTS ARE NOT BEING REMOVED FROM THE REACTION ZONE. THE PRODUCTS ACT AUTOCATALYTICALLY, INCREASING THE REACTION RATE BY A FACTOR OF 100 AND DECREASING THE ACTIVATION ENERGY OF DECOMP. FROM 45 TO 32 KCAL-MOLE. THE HEAT OF REACTION INCREASED 1.5 TIMES IN COMPARISON WITH THAT OBTAINED IN AN OPEN SYSTEM. THE TIME DEPENDENCE OF HEAT EVOLUTION SHOWS TWO MAX. FACILITY: INST. KHIM. FIZ., CHERNOGOLOVKA, USSR.

UNCLASSIFIED

1/2 042 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--KINETICS OF THE THERMAL DECOMPOSITION OF DINITROXYDIETHYLNITRAMINE
IN THE ABSENCE OF GAS EXHAUST FROM THE REACTION ZONE -U-
AUTHOR-(04)-SAMDYLENKO, N.G., VINOKUROV, A.A., ABRAMOV, V.G., MERZHN OV,
A.G.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 39-42
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS
TOPIC TAGS--THERMAL DECOMPOSITION, EXHAUST GAS, ORGANIC NITRO COMPOUND,
CHEMICAL REACTION KINETICS, ACTIVATION ENERGY, AMINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA ME--1995/1406 STEP NO--UR/0076/70/044/001/0039/0042
CIRC ACCESSION NO--AP0116853
UNCLASSIFIED

USSR

UDC: 621.396.677.31

ABRAMOV, V. G., PROKUDIN, V. V.

"Evaluating Amplitude and Phase Inhomogeneities of the Field in the Near Zone of an In-Phase Excited Aperture"

Tr. Kuybyshev. aviats. in-t (Works of the Kuybyshev Aviation Institute), 1970, vyp. 44, pp 35-41 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6B64)

Translation: The authors consider a scalar version of the problem of determining the field in the near zone of an in-phase excited flat aperture of arbitrary shape. Special cases of harmonic and pulse excitation are analyzed. A circular aperture gives the least uniform field in the case of harmonic excitation. A uniform field can be produced with any form of aperture including circular when sufficiently short exciting pulses are used. Two illustrations, bibliography of three titles. N. S.

USSR

UDC: 51:621.391

ABRAMOV, V. A.

"Estimate of the Number Readout Error When Using a Transmission System of N Channels"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (collected Scientific Works on Microelectronics Problems. Moscow Institute of Electronic Technology), 1970, vyp. 5, pp 174-178 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V451)

Translation: An attempt is made to evaluate the error in readout of an N-place binary number in the case of transmission on N channels.
V. Dyn'kin.